



BY SARAH FAWCETT/SPECIAL TO THE CHRONICLE

Dr. Warren King examined skydiver Kathy Orlando, who recently had transplant surgery on her knee

King also ordered one up for Rollerblader Godfrey's particularly nasty leg break.

In the clinic, the most important recent advances have to do more with surgical reconstruction techniques and transplants. Natural tissue from an organ donor helped put professional skydiver and pilot Kathy Orlando of Aptos back on her feet. She had torn out her knee when trying to dodge a crowd at a skydiving show. She relied on an extensive rehabilitation program instead of fancy gizmos.

But in cases such as Williams, a \$3,000 bone-growth stimulator was considered cheap insurance.

"There's reason to think it might speed things up. And when you have a guy like Matt Williams, every day counts," King said.

Williams just returned to the playing field, although it's impossible to say whether the OrthoLogic unit made any difference. Godfrey just got his machine last week so it's too soon to tell.

Keeping track of bone growth, in fact, is no easy matter and is one of the main areas for new research.

Dr. Nancy Lane at the University of California at San Francisco, along with other researchers from Lawrence Livermore Laboratory and the Stanford University Linear Accelerator Center, are working on space-age methods of "photographing" the internal structure of living bone to show how estrogen loss affects bone mass.

Using laboratory rats, Lane has been producing remarkable three-dimensional images of living bone and how osteoporosis depletes

INLINE MAYHEM

Among participatory sports, inline skating was the seventh-biggest cause of major injuries in 1994, up from No. 15 in 1993.

SPORT	1994 Injuries	1992 Injuries	% Change
Basketball	718,000	753,000	-4.6%
Biking	606,000	650,000	-6.9
Football	425,000	447,000	-4.9
Baseball	413,000	477,000	-13.4
Soccer	162,000	160,000	+1.3
Roller skating	88,000	108,000	-18.5
Inline skating	76,000	28,000	+171.4
Exercise	68,000	NA	NA
Weight lifting	60,000	65,000	-7.7
Swimming	33,000	40,000	-17.5

Source: U.S. Consumer Product Safety Commission

CHRONICLE GRAPHIC

published findings in the Journal of Bone and Mineral Research document the dramatic erosion caused by loss of the hormone estrogen.

Lane said this may eventually lead to therapeutic advances for osteoporosis victims, particularly in identifying who might be a candidate for controversial hormone therapy.

"This may tell us more about a person's risk," she said.

Meanwhile, Metra Biosystems Inc. in Mountain View is developing an array of blood and urine tests that use "biochemical markers" to track bone metabolism. The company went public in June at \$10 a share on Nasdaq, closing last week at 18%.

These and other new diagnos-

pies that carry the risk of side effects or have yet to prove themselves in clinical tests.

Genentech Inc., for example, the South San Francisco biotech company, is collaborating with orthopedics manufacturer DePuy Inc., the world's biggest maker of total hip implants, on a bone-growth protein called TGF-B.

That's years away from patients. For this summer's Rollerbladers, the best technology advice came from Dr. James Johnson, chief of orthopedics at Kaiser Permanente in South San Francisco: "Use wrist supports," he said.

A Rollerblade enthusiast, Johnson recalled a recent case in which a 10-year-old boy loaned one of his wrist supports to a visiting out-of-town cousin, and wound up break-